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In a future communication I shall request leave to propose a new and simple nomenclature for the variable stars, which is inexhaustible, and which has already received the unanimous approbation of several of the highest authorities in England.

Hartwell Observatory, May 10, 1860.

On the supposed Variability of the closest Companion of σ Orionis. By the Rev. W. R. Dawes.

When so acute an observer as Sir William Herschel overlooked an object which has since been seen with little difficulty, with the same or even less powerful means, we have at once some ground to suspect variability of light; and it becomes a matter of interest to decide the question. With reference, therefore, to the smallest and closest star of the quadruple group constituting *σ Orionis*, I beg to lay before the Society an extract or two from my astronomical note-books bearing on the point.

In the year 1829, while I was residing at Ormskirk, and previously to the erection of my 5-foot equatoreal, Mr. Lassell lent me a 7-foot Newtonian reflector of his own making, having an aperture of 7¼ inches, which I generally reduced to 6¼. With this instrument the observation is made which is thus recorded:

"1829, Dec. 15, *σ Orionis*, on meridian with a new negative eye-piece magnifying about 300 times, and aperture 6¼ inches, a *new star* was immediately recognised near *σ*. It is closer than the nearest of the bright triple set, and much fainter; but becomes far more positive with high powers. The negative power 360 showed it better still; and the highest, 600, rendered it very conspicuous. It was even steadily visible with *five inches aperture*. With 6¼ and power 120 it was barely visible —only by glimpses; with 180, just steady. But it was neat and steady with concave eye-glasses magnifying 140 and 250. If this new star had formerly been as bright, I conceive it would have been detected by myself in my former observations, if not by South with his 7-foot refractor [of 5 inches aperture]. At any rate Sir W. Herschel would have seen it."

It was not until Sir John Herschel presented me with Struve's large Dorpat Catalogue in 1833 that I was aware that this star had been seen by any other observer.

With my 5-foot refractor I obtained the following measures of position and distance, (see *Mem. R.A.S.*, vol. viii., p. 79),

$$1831{\cdot}09, \quad P = 234^{\circ}{\cdot}84;\ D = 11''{\cdot}478.$$

In the notes, I have remarked, "Bears a moderate illumi-

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nation." . . . "Is seen better for a little illumination, but does not bear magnifying." . . . "Much better seen with 140 than with 226."

Subsequently I saw it well with a much smaller telescope, viz., a very fine 43-inch refractor of 2·7 inches aperture, by Peter Dollond, and have recorded as follows:—

"1843, Oct. 26. With 200 and 130 the smallest companion was occasionally discernible. I think that in fine circumstances and near the meridian it would be pretty steadily visible, perhaps more so with a lower power.

"Oct. 28. Very bad night. With power 200, the smallest companion occasionally visible. Power 77, it is sometimes steadily seen nearly throughout the field of view. I am surprised to see it so well on so indifferent a night."

With the larger telescopes I have since used it has always been visible; and any diminution in its apparent brightness I have attributed to the combined effect of its moderate altitude and varying atmospheric circumstances acting unfavourably on its delicately pale light. Yet the evidence taken altogether is perhaps sufficiently strong to warrant its being placed upon the list of *suspected* variables.

Observatory, Haddenham, Bucks,
1860, *May* 10.

A Catalogue of the Positions and Distances of 398 *Double Stars.* By Lord Wrottesley.

The following is extracted from the introductory observations which accompanied the Catalogue:—

"The positions and distances of the stars contained in the subjoined catalogue are the results of observations made by my assistants, Messrs. Simms, Philpott, and Frederick Morton, but the far greater number of the stars have been observed since the beginning of the year 1854 by Mr. Morton, to whose industry, ability, and skill I can bear ample testimony. He is a good observer and an accurate computer.

"The telescope employed is the equatoreal mentioned in my former communication, *Memoirs*, vol. xxiii., as forming part of the furniture of my observatory. It is 10 feet 9 inches in focal length, with a clear aperture of $7\frac{1}{4}$ inches; the mounting is in the usual English form; the declination and hour-circles are each 3 feet in diameter, and their verniers read to 10″ in space and to seconds of time. A wire micrometer only has been employed, the screw-heads of which are divided into 100 parts, the value of each of which is 0″·1564, and the position circle of 4 inches diameter is graduated in silver with a vernier

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